Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

A280.39
M34Amd
Cop.4

LIBRARY
CURRENT SERIAL REC
MAY 13 1959
U. S. DEPARTMENT OF AGRICULTURE

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Washington 25, D. C.

THE MARKETING RESEARCH STORY
---SOME HIGHLIGHTS---

The bill for the final sale of products of farm origin (domestic and foreign) in the United States is more than $100 billion a year. This is roughly equal to one-fourth of the value of all the goods and services produced in the United States -- the "gross national product."

Costs of marketing (everything done to the products from the farm to the final user) account for nearly three-fourths of that bill.

Marketing of agricultural products now requires substantially more workers than farm production.

The Congress, in the Agricultural Marketing Act of 1946, stated its policy "to promote through research, study, experimentation, and through cooperation among Federal and State agencies, farm organizations, and private industry a scientific approach to the problems of marketing, transportation, and distribution of agricultural products similar to the scientific methods which have been utilized so successfully during the past eighty-four years in connection with the production of agricultural products so that such products capable of being produced in abundance may be marketed in an orderly manner and efficiently distributed."

The Agricultural Marketing Service is at work on more than 500 marketing research projects during the current fiscal year, at a total cost of nearly $7.5 million. These include work in market development, market organization and costs, maintaining, improving, and evaluating product quality, and transportation and marketing facilities.

Dollar Savings In Marketing

Guided by plans developed by the U. S. Department of Agriculture, local agencies, in the last decade, have built about 25 food marketing centers to replace wasteful, insanitary facilities. Others are under construction. The new facilities already built are saving an estimated $15 million a year, compared with the old ones.

A new Philadelphia market, now under construction, will save an estimated $6 million a year compared with previous marketing costs. A projected new fruit and vegetable market for New York City will save an estimated $10 million a year, and a projected market at Detroit, $7 million.

Prepared for distribution at meeting of Newspaper Farm Editors Association in Washington, D. C.

AMS-304

May 1959

Other examples of savings resulting at least in part from AMS marketing research:

Better cotton warehousing and handling	$3,000,000 a year
Grain aeration -- handling efficiency and more efficient use of storage space	$3,000,000 a year
Electronic blood spot detector for eggs	$1,000,000 a year
New way of loading watermelons in railroad cars	$ 500,000 a year
Improved shipping of tomatoes	$
Other savings in packing and handling of perishable fruits and vegetables	$5,000,000 a year
Hydrocooling and multiwalled bags for Texas carrots	$1,000,000 a year
Discontinued waxing of Maine potatoes	$ 80,000 a year
Less refrigeration for California grapes shipped from storage	$ 780,000 a year
Storing and handling farmers' stock peanuts	$ 500,000 a year

Changes in Marketing

The marketing research program and its relation to the technological revolution in marketing are discussed in more detail in the following pages.

The physical handling of farm products between grower and consumer exemplifies a revolution in the agricultural industries. Not long ago, fruits and vegetables were handled almost entirely in one-man-size boxes or crates, laboriously loaded one at a time on a handtruck carrying 3 or 4 containers and pushed from place to place -- into a packing plant or storage house, within it, and out for delivery to a buyer.

Now industrial lift trucks in many storage houses, and even in retail stores, take most of the burden off the hand laborer. They move the products faster, at lower cost per unit, and with less damage to the contents than the old hand-labor way of doing things. This is "unitizing" -- handling two or three dozen boxes, crates, or other containers as a unit, picked up by an industrial lift truck and moved rapidly from one place to another. Unitizing has cut handling costs for many commodities by anywhere from 25 to 75 percent. Research by the Agricultural Marketing Service has speeded up the change to unitized handling, by showing how it is done and how much it saves.

Somewhat similar use is being made of lift trucks in cotton warehouses. The 500-pound bales can be picked up, as many as six or even more at a time, and moved around the plant or loaded onto trucks or railroad cars for shipment. The reduction in required manpower for this work is phenomenal -- in some operations, one or two men can do the work formerly done by ten or more, AMS has found.

Improved Methods

Marketing research has helped also in improving efficiency of wholesale and retail food stores. It has shown how to reduce the cost of handling goods

in the stores, how to expedite price-marking, stocking of shelves, and other operations, and how to reduce spoilage and deterioration of perishables by better handling and cooling.

Prepackaging and self-service, key processes in the operation of supermarkets, have been the object of extensive study by both the Agricultural Marketing Service and the industry -- often by both working together. This research also has helped to hold down marketing costs.

One product of prepackaging is maintenance of quality of foods. Often attractive packaging pays for itself in reduction of spoilage and waste of perishable produce. The customer reaps the benefit in high-quality produce, unwilted and without decay. And the retailer recoups the cost of prepackaging many items by not having to throw out large quantities of spoiled foods. AMS has many more such studies under way.

About half of all fresh fruits and vegetables now sold in food stores are prepackaged. Twenty years ago, there was practically no prepackaged fresh produce in food stores.

Vacuum Cooling

The cost of shipping lettuce by the method used up to recent years, with ice in, above, and between the crates, was quite high. To withstand the effects of moisture and ice, wooden crates were used to package the lettuce. Almost 7 tons of ice were used in the packages and over the top of the load in every railroad car carrying lettuce.

For transportation without ice, vacuum cooling of lettuce was developed. As a result, lettuce could be cooled after packing in the fields. Vacuum cooling chilled the lettuce enough to place it directly into fan-equipped refrigerator cars. It eliminated the need for large ice plants, and the labor necessary to handle ice and lettuce in wooden boxes. With elimination of ice in the package and on the top of the load, fiber boxes could be substituted for wooden ones. Money was saved in almost every step of the operation.

Just 10 years ago, about 90 percent of all lettuce was shipped in ice. Now, about 90 percent is shipped without ice in the car. And marketing research had an important hand in the widespread adoption of the new methods.

All of these developments flow over into other fields. For example, broccoli and similar crops are vacuum cooled. Harvesting methods in which field crates are eliminated have been extended to crops other than lettuce. Cantaloups and other melons are examples.

Some modern technological developments haven't been this complicated. In the carrot industry, thousands of dollars in transportation costs are saved just by cutting off the tops in the field. People don't eat them, so why ship them? Another improvement has been the polyethylene bag in which many carrots are

packed. This protects them during their journey to market, holds them in groups according to size, and makes them more sanitary for the consumer. The polyethylene bag also keeps the carrots in better condition in the home refrigerator.

Tomato Shipping Temperatures

And tremendous savings have been effected in the shipping of tomatoes, simply by shipping them at higher temperatures than had been customary. AMS researchers found that lower temperatures injured tomatoes, so that they failed to ripen properly.

Technological improvements have been made in the storage of both fiber products and grains.

A mothproofing agent can, and often is, added to the dye for woolens. It won't dry-clean out, and it makes the material safe from moths for many years.

Grain storage has had its full share of improvement. One of the big problems in harvesting grain is the amount of moisture it contains. Now in use in many elevators is a new way for getting rid of this excess moisture. Formerly, in order to evaporate the moisture, the grain was moved through the air from bin to bin. This used extra labor, wasted space, and damaged some of the grain. Elevator operators now move the air through the grain. This is known as aeration. Fans pull the air from vents in the top of the bin down through the grain. As happens so often in technological advances, this is not the end of the story. Fumigants are introduced while the air is being blown through the grain. Result: Not only better aeration, but better fumigation.

This story goes on and on throughout the marketing channels. Now apples are actually put to sleep to awaken as a better product for the consumer, and as a product that brings more money to the farmer. Take the case of New England McIntosh apples. Years ago, it was impossible to store them for great periods of time. Now during storage, much of the oxygen is removed from the air. Carbon dioxide is added to the storage atmosphere. This puts the apples to sleep until they are ready to awake for the consumer's table. Over 1.5 million bushels of apples are now being stored this way each year.

Markets for farm products have been broadened through the work of AMS.

Wider Market For Milk

Studies of the effect of the Government's special milk program on milk drinking in schools pointed the way for the dairy industry to sell many millions of pints of milk over the usual level of sales. The program has increased sales substantially where it has been in operation, and the findings of the AMS studies are stimulating extension of the program into more and more areas.

A test of the marketability of potato flakes, a new type of dehydrated prod-

uct for making mashed potatoes, proved the flakes to be quite popular and resulted in development of a whole new segment of the potato industry. Plants have been built at several places to make the flakes, developed originally by the Agricultural Research Service of USDA.

Studies of consumers' preferences among different fibers in different articles of apparel and household furnishings and for other uses are providing guides to the cotton, wool, and related industries in meeting the wants of purchasers more adequately. Similar studies of preferences among different types of food products have been made, guiding those industries also in meeting consumer's needs and wants.

The research results mentioned are only a few examples out of many. The hundreds of research projects now under way, moreover, are steadily and rather rapidly producing more and more savings in marketing. Here are a few of the things being looked into, and the objectives:

Modernizing Market Facilities

Plans are being developed for modernization of produce market facilities in about eight more cities. If experience can be taken as a guide, the modernized facilities that actually will be built will again save more in marketing costs than the cost of all AMS research along all lines.

Other facilities used in marketing also are under study. They include equipment and methods for the physical handling of all sorts of agricultural products, from the farm gate through transportation, storage, processing, wholesaling, and retailing. There is good reason for expecting cost reductions and improved efficiency in these fields even greater than those already developed.

More studies of consumer preferences and potential markets for numerous commodities are under way or are being started. The probable consumer demand for grapefruit juice of different kinds; for rice in industrial and institutional uses; for hides and leather; for cotton fabrics for different uses; and for sugar use in the poultry industry are among subjects being studied. And differing methods of promoting sales of foods are being compared, as a basis for increasing the markets for various commodities.

AMS is studying the maintenance of quality of fruits and vegetables shipped in heavier loads by rail than have been customary. The railroads have proposed the heavier loading of cars as a way of cutting down transportation costs per unit, but the effects on the commodities are not yet fully known. Ways of handling and merchandising tomatoes so that they will reach consumers in the best possible condition are under study. Irradiation of fruits and vegetables to retard spoilage is under investigation. And economical ways of packaging meat at the packing plant for retail display are being sought.

A newly developed electronic device, called the hortispect, promises to be of major help to the fruit industry in reducing spoilage and expanding markets.

The instrument, developed by AMS, shoots a beam of light through a sample of fruit, and records the degree of ripeness or greenness. It is expected to guide the industry in assuring that fruits are shipped at the correct stage of ripeness both to stand up during transportation and to please consumers. Thus losses during marketing might be reduced, and the market expanded by providing homemakers with just what they want.

Problems in marketing meat-type hogs -- the leaner kind preferred by consumers -- are being tackled. The results, it is hoped, may help to maintain or expand the market for pork products, which has not been doing too well in comparison with that for some other meats.

Marketing Costs and Margins

Marketing costs and margins for many farm products are the subject of continuing study. The findings help industries to locate and correct the parts of their operations that are relatively costly, thus helping to hold down the total costs of marketing.

At all levels of this work, there are stories -- available or in prospect that affect in a practical way the interests of farmer, processor and merchandiser, and consumer.